

REMARKS

Claims 3, 6, 9, and 13 are currently being cancelled, while claims 1-2, 5, 7-8, 10-12, and 14-15 are currently being amended.

These amendments do not introduce new matter within the meaning of 35 U.S.C. §132. Accordingly, the Examiner is respectfully requested to enter the amendments.

1. Rejection of Claims 1-10 and 14-15 Under 35 U.S.C. §112, 2nd

Paragraph

The Office Action states,

Claims 1-10, 14 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP §2172.01. The omitted steps are:

Claim 1 recites in the preamble '(a) process for preparing propylene polymer compositions in an at least two-stage process.' This is not clear that any one composition is being made since there is nothing to indicate any mixing or interpolymerization, such as would be expected from reactors in sequence or parallel. The only requirements recited are compositional, in nature, and the recitations of claims 1-7 are drawn to a process. In claims 8, 9, 14 and 15, the recitation in the section prior to the addition of the third component are likewise vague since there is nothing to provide a single product. Claim 10, applicants recite essentially a product-by-process but, as pointed out above, fail to provide sufficient guidance to produce.

RESPONSE

Claims 3, 6, and 9 have been cancelled rendering the rejection thereof moot. With respect to claims 1-2, 4-5, 7-8, 10, and 14-15, Applicant respectfully traverses the rejection thereof.

First and foremost, as outlined in Applicant's response of November 29, 2007, the Examiner's focus during examination of claims for compliance with the requirement for definiteness under 35 U.S.C. §112, second paragraph, is whether the claims meet the threshold requirements of clarity and precision, and not whether more suitable language or modes of expression are available. Accordingly, the Examiner should allow claims that define the patentable subject matter with a **reasonable** degree of particularity and distinctness.

Additionally, definiteness of claim language must be analyzed, not in a vacuum, but in light of:

- (A) The content of the particular application disclosure;
- (B) The teachings of the prior art; and
- (C) The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made. See MPEP §2173.02.

Further, the requirement to "distinctly" claim means that the claim must have a meaning discernible to one of ordinary skill in the art when construed according to correct principles. . . .Only when a claim remains insolubly ambiguous without a discernible meaning after all reasonable attempts at construction must a court declare it indefinite. *Metabolite Labs., Inc. v. Lab. Corp. of Am. Holdings*, 370 F.3d 1354, 1366, 71 USPQ2d 1081, 1089 (Fed. Cir. 2004).

With respect to the instant rejection, the current Office

Action states,

Claim 1 recites in the preamble '(a) process for preparing propylene polymer compositions in an at least two-stage process.' This is not clear that any one composition is being made since there is nothing to indicate any mixing or interpolymerization, such as would be expected from reactors in sequence or parallel. The only requirements recited are compositional, in nature, and the recitations of claims 1-7 are drawn to a process.

However, it is not essential to a patentable combination that there be interdependency between the elements of the claimed device, or that all the elements operate concurrently toward the desired result. *Ex parte Nolden*, 149 USPQ 378, 380 (Bd. Pat. App. 1965). Additionally, a claim does not necessarily fail to comply with 35 U.S.C. 112, second paragraph where the various elements do not function simultaneously, are not directly functionally related, do not directly intercooperate, and/or serve independent purposes. *Ex parte Huber*, 148 USPQ 447, 448-49 (Bd. Pat. App. 1965). See MPEP §2172.01. Accordingly, for this reason alone, Applicant respectfully believes the current rejection should be withdrawn.

Notwithstanding, Applicant respectfully traverses the Examiner's contention that it "is not clear that any one composition is being made". However, Applicant's currently pending claim 1 recites,

A process for preparing a **propylene polymer composition** in an at least two-stage process, wherein,

in a first polymerization stage, a propylene homopolymer is prepared by polymerization, and

in a second polymerization stage, ethylene and propylene are polymerized to give an ethylene/propylene copolymer comprising from 95% to 99.5% by weight of ethylene,

wherein the amount of the ethylene/propylene copolymer in **the propylene polymer composition** ranges from 10 to 50% by weight, and the propylene polymer composition comprises a melt flow rate, MFR, from 2 to 50 g/10 min. in accordance with ISO 1133 at 230°C and 2.16 kg. (Emphasis added)

Accordingly, given the clear and plain language of claim 1, Applicant is currently claiming a process for producing propylene polymer compositions, wherein the propylene polymer compositions comprise a propylene homopolymer and an ethylene/propylene copolymer. Additionally, Applicant respectfully believes one having ordinary skill in the art would appreciate the metes and bounds of claim 1, as well as all the claims that depend from claim 1. As such, Applicant respectfully requests the Examiner to withdraw the current rejection.

With respect to claims 8, 14, and 15, Applicant's arguments *supra* regarding claim 1 are incorporated herein by reference in their entirety. Therefore, as with claim 1, Applicant respectfully believes one having ordinary skill in the art would appreciate the metes and bounds of claims 8, 14, and 15.

In light of the above, Applicant respectfully believes claims 1-2, 4-5, 7-8, 10-12, and 14-15 comply with 35 U.S.C. 112, 2nd paragraph, and that one having ordinary skill in the art would appreciate the metes and bounds thereof. As such, Applicant respectfully requests the Examiner to withdraw the current

rejection.

2. Rejection of Claims 1-15 Under 35 U.S.C. §103(a)

The Office Action states,

Claims 1-15 are rejected under 35 U.S.C. 103(a) as obvious over Cecchin et al (WO 01/19915).

The reference to Cecchin et al teaches the manufacture of a polyolefin blend composition produced in a multistage process wherein the first polymer may be a homopolymer of propylene and the second polymer may be an ethylene/alpha olefin (claim 3). Note the Abstract wherein the first stage polypropylene has a melt flow index as recited in claim 2. Further, note page 1 (lines 19 et seq.) for the process as shown in claims 1, 2, 3 and 6. The reaction conditions of gas phase (claim 4), temperature and pressure (claim 5) are shown at page 7 (line 21 et seq.). Note page 13 for the production of articles. At page 4 (lines 22 et seq.) where the use of multiple stages, i.e. 'at least three polymerization steps' is contemplated, which at least renders obvious the recitations of claims 7, 8, 14 and 15. The reference shows the specific MFR of the polymer blend as 'equal to or higher than 4 g/10 min.' at page 2 (lines 12-14). The reference clearly shows ethylene content of the ethylene copolymer as being from 60 to 90% of the copolymer at page 1 (lines 27-29). This is clear since the comonomer may be present in a range of 'from 10 to 40%' which gives an ethylene content of 90% as required by the claim. As such, applicant has combined known elements in a known fashion to provide results that would be expected and predictable, as shown by the reference.

RESPONSE

Claims 3, 6, 9, and 13 have been cancelled rendering the rejection thereof moot. As for claims 1-2, 4-5, 7-8, 10-12, and 14-15, Applicant respectfully traverses the rejection thereof.

The U.S. Supreme Court in *Graham v. John Deere Co.*, 148

U.S.P.Q. 459 (1966) held that non-obviousness was determined under §103 by (1) determining the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims at issue; (3) resolving the level of ordinary skill in the art; and, (4) inquiring as to any objective evidence of non-obviousness.

Accordingly, for the Examiner to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See MPEP §2142.

Arguments regarding WO 01/19915 (herein referred to as "Cecchin, et al.") in Applicant's response of November 29, 2007 are incorporated herein by reference in their entirety.

With respect to the current rejection, Applicant respectfully believes Cecchin, et al. fails to disclose, teach, or suggest Applicant's currently claimed process for preparing propylene polymer compositions in an at least two-stage process, wherein,

in a first polymerization stage, a propylene homopolymer is prepared by polymerization, and

in a second polymerization stage, ethylene and propylene are polymerized to give an ethylene/propylene copolymer comprising from 95% to 99.5% by weight of ethylene, wherein the amount of the ethylene/propylene copolymer in the propylene polymer composition ranges from 10 to 50% by weight, and the propylene polymer composition comprises a melt flow rate, MFR, from 2 to 50 g/10 min. in accordance with ISO 1133 at 230°C and 2.16 kg. Additionally, Applicant respectfully believes Cecchin, et al. fails to disclose, teach, or suggest Applicant's currently claimed propylene polymer composition obtained by at least a two-stage process, wherein,

in a first polymerization stage, a propylene homopolymer is prepared by polymerization, and

in a second polymerization stage, ethylene and propylene are polymerized to give an ethylene/propylene copolymer comprising from 95% to 99.5% by weight of ethylene,

wherein the amount of the ethylene/propylene copolymer in the propylene polymer composition ranges from 10 to 50% by weight, and the propylene polymer composition comprises a melt flow rate, MFR, from 2 to 50 g/10 min. in accordance with ISO 1133 at 230°C and 2.16 kg.

In fact, Cecchin, et al. discloses on page 1, line 19 - page 2, line 4,

Such a goal has now been achieved by the polyolefin compositions of the present invention, comprising (percent by weight):

A) 60-95%, preferably 70%-90%, more preferably 70%-88%, of a crystalline polypropylene component having a Melt Flow Rate (MFR^A) value (measured at 230°C, with 2.16 Kg load) of from 2.5 to 50, preferably from 5 to 50, more preferably from 10 to 30 g/10 min., and containing from 20% to 80%, preferably from 40% to 60%, of a fraction A^I) having a Melt Flow Rate (MFR^I) value (measured at 230°C, with 2.16 Kg load) of from 0.5 to 8, preferably 0.5 to 5, more preferably from 1 to 3 g/10 min., and from 20% to 80%, preferably from 40% to 60%, of a fraction A^{II});

B) 5%-40%, preferably 10%-30%, more preferably 12%-30%, of a **copolymer of ethylene** with one or more C₄-C₁₀ **α-olefin(s)** containing from 10 to 40%, preferably from 15 to 30%, more preferably from 15 to 25%, of said C₄-C₁₀ **α-olefin(s)**;

said fractions A^I) and A^{II}) being independently selected from propylene homopolymers and random copolymers of propylene containing up to 15%, preferably up to 10%, of ethylene and/or C₄-C₁₀ α-olefin(s); the ratio MFR^A/MFR^I being from 2 to 25, preferably 4 to 20; the percentages of A) and B) being referred to the sum of A) and B), and the percentages of A^I) and A^{II}) being referred to the sum of A^I) and A^{II}). (Emphasis Added)

Accordingly, Applicant respectfully believes Cecchin, et al. fails to disclose, teach, or suggest, at the very least, Applicant's currently claimed process, wherein an **ethylene/propylene copolymer** comprising from **95% to 99.5% by weight of ethylene** is produced in a second polymerization stage.

In light of the above, Applicant respectfully believes claims 1-2, 4-5, 7-8, 10-12, and 14-15 are novel and patenably distinct from the references of record, and request the current rejection to be withdrawn.

3. Rejection of Claims 1, 2, 4-6 and 10-12 Under 35 U.S.C.

§103(a)

The Office Action states,

Claims 1, 2, 4-6 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seelert et al (US 2002/0019488).

The reference to Seelert et al teaches the manufacture of a polypropylene composition wherein the first stage may be a homopolymer of propylene and the second stage an ethylene/C₄-C₂₀-alk-1-ene, as herein recited. The MFR of the homopolypropylene is 'from 0.1 to 100 g/10 min.' as in claim 2. Note the Abstract and paragraph [0022]. Further, note paragraphs [0047] to [0051] wherein it is taught the use of the gas phase (claim 4), the polymerization conditions (claim 5) and the concept of claim 6. The reference teaches the manufacture of films, fibers and moldings at paragraph [0201].

The reference fails to show the specific MFR of the polymer blend, yet the range recited is common for this type of polymer blend. Further, any manipulation thereof, which is not shown by the claims, would have been within the skill of an artisan with an eye toward end-use. As such, the skilled artisan would have a high level of expectation of success following the teachings of the reference.

RESPONSE

Claim 6 has been cancelled rendering the rejection thereof moot. Regarding claims 1-2, 4-5, and 10-12, Applicant respectfully traverses the rejection thereof.

The U.S. Supreme Court in *Graham v. John Deere Co.*, 148 U.S.P.Q. 459 (1966) held that non-obviousness was determined under §103 by (1) determining the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims at

issue; (3) resolving the level of ordinary skill in the art; and, (4) inquiring as to any objective evidence of non-obviousness.

Accordingly, for the Examiner to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See MPEP §2142.

Arguments regarding U.S. 2002/0019488 (herein referred to as "Seelert, et al.") in Applicant's response of November 29, 2007 are incorporated herein by reference in their entirety.

With respect to the current rejection, Applicant respectfully believes Seelert, et al. fails to disclose, teach, or suggest Applicant's currently claimed process for preparing propylene polymer compositions in an at least two-stage process, wherein,

in a first polymerization stage, a propylene homopolymer is prepared by polymerization, and

in a second polymerization stage, ethylene and propylene are polymerized to give an ethylene/propylene copolymer comprising from 95% to 99.5% by weight of ethylene,

wherein the amount of the ethylene/propylene copolymer in the propylene polymer composition ranges from 10 to 50% by weight, and

the propylene polymer composition comprises a melt flow rate, MFR, from 2 to 50 g/10 min. in accordance with ISO 1133 at 230°C and 2.16 kg. Additionally, Applicant respectfully believes Seelert, et al. fails to disclose, teach, or suggest Applicant's currently claimed propylene polymer composition obtained by at least a two-stage process, wherein,

in a first polymerization stage, a propylene homopolymer is prepared by polymerization, and

in a second polymerization stage, ethylene and propylene are polymerized to give an ethylene/propylene copolymer comprising from 95% to 99.5% by weight of ethylene,

wherein the amount of the ethylene/propylene copolymer in the propylene polymer composition ranges from 10 to 50% by weight, and the propylene polymer composition comprises a melt flow rate, MFR, from 2 to 50 g/10 min. in accordance with ISO 1133 at 230°C and 2.16 kg.

In fact, Seelert, et al. discloses on page 1, line paragraphs [0013] - [0016],

We have found that this object is achieved by novel propylene polymers containing

a) from 50 to 95 parts by weight of a propylene homopolymer having a melt flow index of from 0.1 to 100 g/10 min. at 230° C. and under a weight of 2.16 kg, according to ISO standard 1133, and an isotacticity index of at least 98 %,

b) from 5 to 50 parts by weight of an **ethylene copolymer** containing from 4 to 40 % by weight of polymerized **C₄-C₂₀-alk-1-ene** and having a density of from 0.865 to 0.920 g/cm³ and

c) from 0 to 1.5 parts by weight of a nucleating agent, the sum of the parts by weight of the propylene homopolymer a) and of the ethylene copolymer b) always being 100 parts by weight. (Emphasis Added)

Accordingly, Applicant respectfully believes Seelert, et al. fails to disclose, teach, or suggest, at the very least, Applicant's currently claimed process, wherein an **ethylene/propylene copolymer** comprising from **95% to 99.5% by weight of ethylene** is produced in a second polymerization stage.

In light of the above, Applicant respectfully believes claims 1-2, 4-5, 7-8, 10-12, and 14-15 are novel and patentably distinct from the references of record, and request the current rejection to be withdrawn.

CONCLUSION

Based upon the above remarks, the presently claimed subject matter is believed to be novel and patentably distinguishable over the references of record. The Examiner is therefore respectfully requested to reconsider and withdraw the currently pending rejection, and allow claims 1-2, 4-5, 7-8, 10-12, and 14-15. Favorable action with an early allowance of the claims pending in this application is earnestly solicited.

In order to advance the prosecution of the instant application, the Examiner is welcomed to telephone the undersigned practitioner if he has any questions or comments.

Serial No. 10/522,082

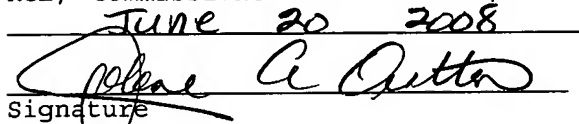
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